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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/647,650	10/03/2000	Pascale Escaffre	1759.011	2392

23405 7590 11/06/2002

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ALBANY, NY 12203

EXAMINER

JOHNSON, EDWARD M

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 11/06/2002

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/647,650

Applicant(s)

ESCAFFRE ET AL.

Examiner

Edward M. Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13-21 and 24-28 is/are pending in the application.
- 4a) Of the above claim(s) 13-21 and 24-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heller 5,616,532 in view of Kimura WO97/00134 (translated in US Pat. 6,228,480).

Regarding claim 1, Heller '532 discloses a photocatalyst coating (abstract) comprising a surface area of silica binder capable of bonding together (see column 3, lines 42-43) having a diameter of less than 30 nm (see column 6, lines 5-7), wherein the photocatalyst-binder composition contains at least 10% binder (see column 10, lines 13-15).

Heller fails to disclose silica particles having a surface area greater than 80 m²/g.

Kimura '480 discloses silica of 180 m²/g.

It is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to

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use the silica of Kimura in the photocatalyst of Heller because Kimura discloses his silica for use in a photocatalyst material (title, column 19, line 19) for improved adhesive property and durability (see column 22, lines 30-35) and Heller discloses photocatalyst surface areas preferably greater than about 100 m²/g (see column 8, lines 47-50).

Regarding claim 2, Heller '532 discloses dispersion in water (see column 10, lines 27-30).

Regarding claim 3, Heller '532 discloses anatase TiO₂ (see column 9, lines 5-6).

Regarding claim 4, Heller '532 discloses 1-50 and 1-10 nm (see column 8, lines 42-46).

Regarding claims 5-6, Heller '532 discloses 10-90% of binder and 10-90% of photocatalyst (see column 10, lines 20-22).

Regarding claim 7, Kimura '480 discloses combination with zeolite to test adhesive property of the composition (see column 16, lines 20-36).

Regarding claim 8, Heller '532 discloses oxidizable carbon (see column 8, lines 1-3).

Regarding claims 9-11, Heller '532 discloses combination of the photocatalyst and binder by dispersion with a mixer (see column 10, lines 41-48).

Response to Arguments

3. Applicant's arguments filed 9/18/02 have been fully considered but they are not persuasive.

The objections and rejections under 35 USC 112(2) have been withdrawn in view of Applicant's amendment.

It is argued that Applicants initially point out that both Heller and Kimura fail to disclose a composition containing a photocatalyzing agent and aqueous colloidal dispersion. This is not persuasive because Heller '532 discloses photocatalysts comprising photoactive metal oxides (see column 8, lines 33-40) and clearly defines to those skilled in the art "colloid, known as sol" (see column 10, lines 27-32).

It is argued that applicants further submit that one of ordinary skill in the art would find no motivation or suggestion in either of the cited references to use silica of the claimed specific area in Heller's composition. This is not persuasive because Heller '532 discloses photocatalysts comprising photoactive metal oxides (see column 8, lines 33-40) and clearly defines to those skilled in the art "colloid, known as sol" (see column 10, lines 27-32). Applicant appears to suggest that the cited reference "teaches away" from the claimed surface area. This is not persuasive simply because the cited references do not disclose that the claimed surface area should not be used, nor does Applicant cite such a disclosure. Applicant instead

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cites a disclosure having to do with polyester, which is not part of the claimed subject matter. The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the silica of Kimura in the photocatalyst of Heller because Kimura discloses his silica for use in a photocatalyst material (title, column 19, line 19) for improved adhesive property and durability (see column 22, lines 30-35) and Heller discloses photocatalyst surface areas preferably greater than about 100 m²/g (see column 8, lines 47-50).

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS

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of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 703-305-0216. The examiner can normally be reached on M-F 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 703-308-3837. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

EMJ

November 4, 2002

A handwritten signature in black ink, appearing to read 'SJB' with a flourish at the end.

**STEVEN BOS
PRIMARY EXAMINER
GROUP 1100**